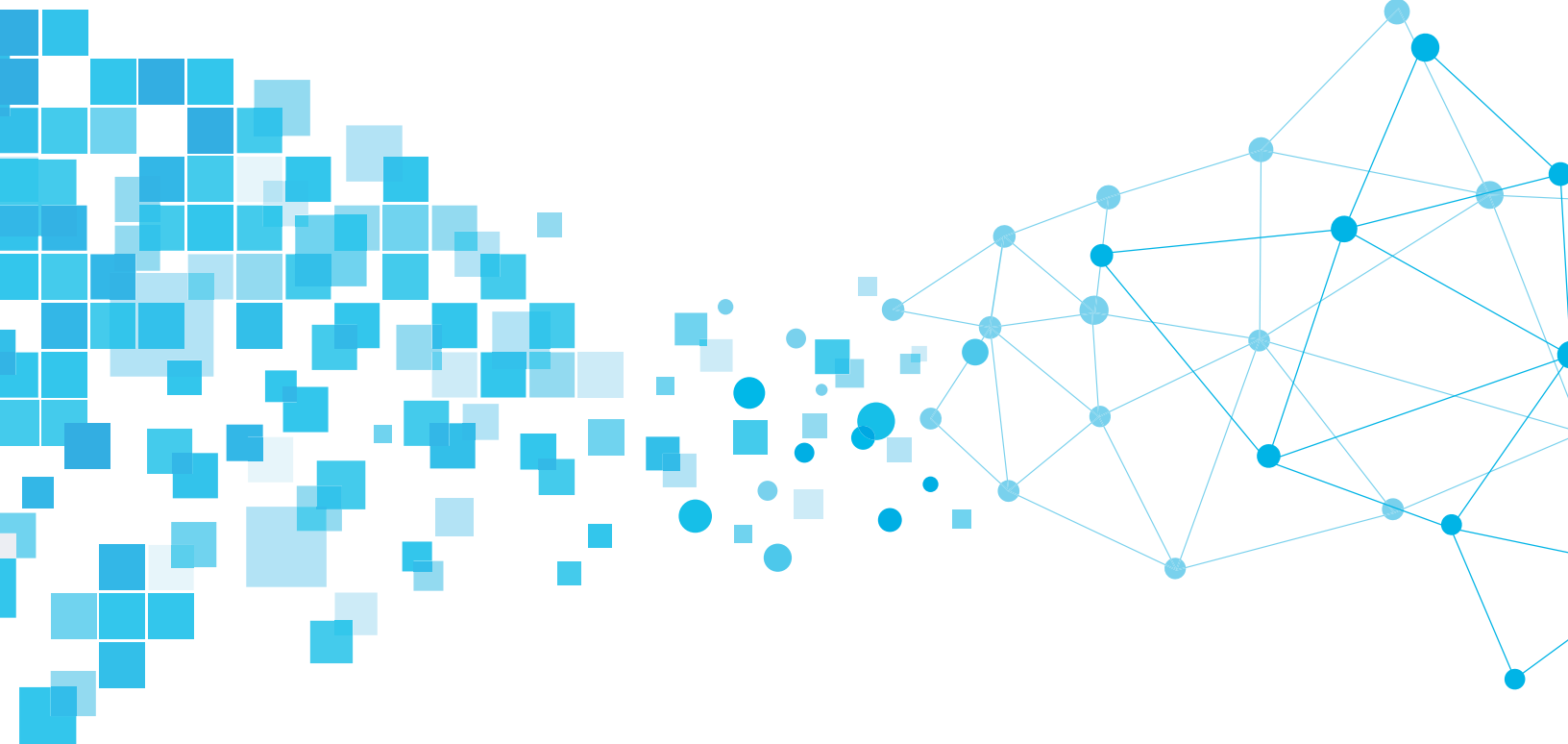# MATCH-3DX

MATCH-3DX
MATCH-3DX MESHING-ADD-ON

MATCH-3DX is a module in the software Inpho® for automatically generating three photogrammetry products: high quality dense point cloud based on Semi-Global-Matching algorithm, high quality true-orthophoto and high quality 3D meshes using Meshing-Add-On.

MATCH-3DX includes the full capability of MATCH-T DSM.

Using the advantageous tile management export tool in MATCH-3DX the final true-orthophotos can be exported in arbitrary areas, tiles or pixel sizes.

Key Benefits

▶ Completely automatic workflow for true orthophoto production directly from the dense point cloud, without ortho-rectifying the aerial images

▶ Minimizing the user interaction in comparison to the traditional, time-consuming and expensive workflow for true-orthophoto production

▶ No need to consider pre-measured morphological data (breaklines, 2D and 3D exclusion areas, borderlines)

▶ Can be combined with the classical orthophoto generation workflow (MATCH-T DSM)

▶ Extracts the colorized point cloud and creates realistic textured 3D-meshes directly from the aerial images

▶ 3D-meshes represent the geometry of the objects with triangles

▶ Textures on the meshes represent the object with photo realistic content for optimal interpretation

▶ Tight integration into point-cloud editing workflows e.g. with DTMaster Stereo

⊕ Trimble®

MATCH-3DX

WORKSTATION RECOMMENDATION

- ▶ Up-to-date workstation with at least 64 GB RAM
- ▶ NVIDIA Graphic card is highly recommended
- ▶ Windows®

IMAGERY RECOMMENDATION

- ▶ Digital frame sensors
- ▶ Nadir, oblique or multi-head imagery
- ▶ Imagery with 80% length and 60% side overlap
- ▶ Panchromatic or multichannel sensor

PRODUCT PACKAGE

- ▶ MATCH-3DX Software and license
- ▶ MATCH-3DX Meshing add-on and license
- ▶ MATCH-3DX True-Orthophoto Tile Management Tool
- ▶ MATCH-3DX includes the full capability of MATCH-T DSM. Therefore, both workflows can be used if a MATCH-3DX license is available.
- ▶ **One year maintenance** for the first year to be extended yearly

RELATED PRODUCTS

- ▶ MATCH-AT
- ▶ DTMaster
- ▶ DTMToolkit
- ▶ DPMaster

APPLICATIONS

- ▶ 3D City Modeling
- ▶ Real-estate
- ▶ Court-yard (mapping accident data scenes)
- ▶ Mining
- ▶ Forest management
- ▶ Construction
- ▶ Monitoring
- ▶ Heritage & archaeology
- ▶ Simulation projects (flight simulation and trainings)
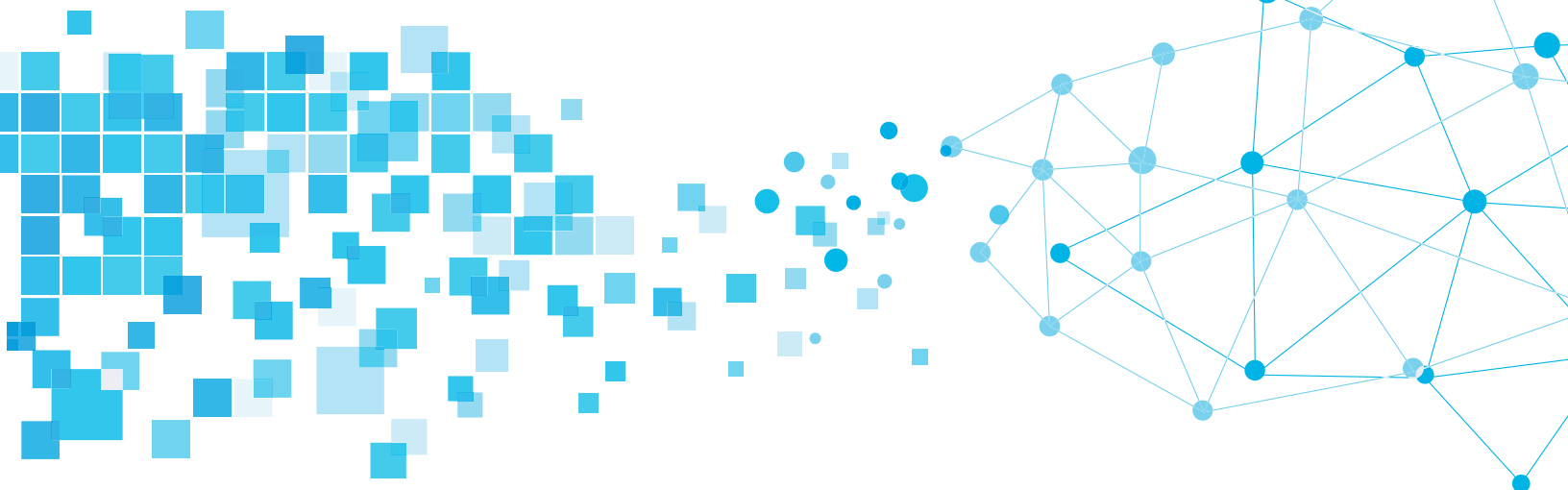
PROJECT TECHNICAL CONSIDERATIONS

- ▶ Dense point clouds from nadir (SGM 2.5D) and oblique (SGM 3D) imagery
- ▶ True-orthophoto (SGM 2.5D), recommended for highly overlapped imagery (i.e. 80x80)
- ▶ Textured-meshes (SGM 3D or SGM 2.5D) in different formats

Input Data/Formats	
Project file	from MATCH-AT
Images	TIFF

Output Data/Formats	
Point Cloud	*.las, *.laz
LoD 3D-mesh	*.osgb, *.obj, *.i3s (SLPK), *.ply, *.cesium, *.dae, *.ive
True-Orthophoto	TIFF (GeoTIFF and TiffWorld)

Contact your local Trimble Authorized Distribution Partner for more information